

recovering a poinsettia plant from said embryo.

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- (Five Times Amended) A method for producing transgenic poinsettia plants, comprising:
 - incubating a poinsettia plant tissue explant that produces a redefish epidermal callus on auxin- and cytokinin-containing callus induction medium to yield a reddish epidermal callus;
 - (b) culturing the reddish epidermal callus on embryo induction medium comprising casein hydrolysate and further comprising NH₄⁺ and or NO₃⁻ to form embryogenic callus;

(c)

- (i) introducing an expression vector into said incubating embryogenic callus to produce transformed embryogenic callus, wherein said expression vector comprises a selectable marker gene and a second foreign gene, or
- introducing two expression vectors into said incubating embryogenic callus to produce transformed embryogenic callus, wherein one of said expression vectors comprises a selectable marker gene, and wherein the second of said expression vectors comprises a second foreign gene;

wherein the vector or vectors of (c)(i) and (c)(ii) are introduced into the incubating embryogenic callus by co-incubating the callus with Agrobacterium tumefaciens containing the vector or vectors or by microprojectile-mediated delivery of the vector or vectors into the callus;

- (d) culturing said transformed embryogenic callus on selection medium; followed by
- (e) culturing said transformed embryogenic callus on developmental medium containing an osmotic pressure increasing agent to yield a transgenic embryo;
- (f) culturing said transgenic embryo on maturation medium; and
- (g) recovering a transgenic plant from said transgenic embryo.

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- 39. (Six Times Amended) A method for producing transgenic poinsettia plants, comprising:
 - incubating a poinsettia plant tissue explant that produces a reddish epidermal callus in auxin- and cytokinin-containing callus induction medium to yield an embryogenic callus;

- subculturing the embryogenic callus to liquid NH₄+ and/or NO₃- containing embryo (b) induction medium comprising casein hydrolysate;
- filtering the culture and culturing the filtrate in fresh liquid empryo induction medium; (c) followed by
- filtering the culture and culturing the filtrate on solid embryo induction medium to (d) yield an embryo;
 - subculturing the embryo produced on said embryo induction medium to maturation medium; followed by
- culturing said embryo on callus induction mediam to yield an epidermal callus; (f) (g) subculturing the epidermal callus produced on said callus induction medium to embryo induction medium to form an embryogenic callus;
 - (i) introducing an expression vegtor into said embryogenic callus to produce transformed embryogenic callus, wherein said expression vector comprises a selectable marker gene and a second foreign gene, or
 - (ii) introducing two expression vectors into said embryogenic callus to produce transformed embryogenic callus, wherein one of said expression vectors comprises a selectable marker gene, and wherein the second of said expression vectors comprises a second foreign gene;

wherein the vector or yectors of (h)(i) and (h)(ii) are introduced into the incubating embryogenic callus by co-incubating the callus with Agrobacterium tumefaciens containing the vector or vectors or by microprojectile-mediated delivery of the vector or vectors into the callus;

- (i) culturing said transformed embryogenic callus on selection medium; followed by
- (i) culturing said transformed embryogenic callus on developmental medium containing an osmotic pressure increasing agent to yield a transgenic embryo;
- (k) culturing/said transgenic embryo on maturation medium; and
- **(l)** recovering a transgenic plant from said transgenic embryo.

80. (Amended) The transgenic poinsettia plant of claim 76, wherein said foreign gene confers resistance to a bacterium or a fungus and encodes a polypeptide selected from the group

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consisting of chitinase, a β-1,3-glucanase, ribosome-inactivating protein, lytic peptide, and plant defensin.

- 101. (Three Times Amended) A method for in vitro regeneration of poinsettia plants comprising:
 - (a) incubating a poinsettia plant tissue explant that produces an epidermal callus on auxin- and cytokinin-containing callus induction medium;
 - (b) subculturing the reddish epidermal callus to embryo induction medium comprising a nitrogen source to form embryogenic/callus;
 - culturing said embryogenic callus/on developmental medium containing an osmotic (c) pressure increasing agent and cytokinin; followed by
 - (d) culturing said embryogenic caflus on maturation medium to yield an embryo; and
 - (e) recovering a poinsettia plant from said embryo.

102. (Four Times Amended) A method for producing transgenic poinsettia plants comprising the steps of:

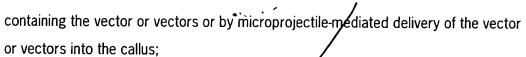
- (a) incubating a poinsettia plant tissue explant that produge epidermal callus on auxinand cytokinin-containing callus induction medium to field an embryogenic callus;
- (b) subculturing the embryogenic callus to embryo induction medium comprising casein hydrolysate and further comprising NH₄⁺ and/or/NO₃ to form an embryogenic callus containing embryos:

(c)

- (i) introducing an expression vector into said incubating embryogenic callus to produce transformed embryogenic callus, wherein said expression vector comprises a selectable marker gene and a second foreign gene, or
- (ii) introducing two expression lectors into said incubating embryogenic callus to produce transformed empryogenic callus, wherein one of said expression vectors comprises a selectable marker gene, and wherein the second of said expression vectors comprises a second foreign gene;

wherein the vector or vector's of (c)(i) and (c)(ii) are introduced into the incubating embryogenic callus by co-jhcubating the callus with Agrobacterium tumefaciens

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- (d) culturing said transformed embryogenic callus containing embryos on selection medium; followed by
- (e) culturing said embryogenic callus containing embryos on developmental medium containing an osmotic pressure increasing agent to yield a transgenic embryo;
- (f) culturing said transgenic embryos on maturation medium; and
- (g) recovering a transgenic plant from said transgenic embryos.
- 103. (Three Times Amended) A method for producing transgenic poinsettia plants comprising the steps of:
 - (a) incubating a poinsettia plant tissue explant that produces a epidermal callus on auxinand cytokinin-containing callus induction medium to produce an embryogenic callus;
 - subculturing the embryogenic callus produced on said callus induction medium to liquid embryo induction medium comprising casein hydrolysate and further comprising NH₄⁺ and/or NO₃⁻;
 - (c) filtering the culture and culturing the filtrate in fresh liquid embryo induction medium; followed by
 - (d) filtering the culture and culturing the filtrate on solid embryo induction medium to produce embryos;
 - subculturing the embryos produced on said embryo induction medium to maturation medium; followed by
 - (f) culturing said embryos on callus induction medium to yield an embryogenic callus;
 - (g) subculturing the embryogenic callus produced on said callus induction medium to embryo induction medium to form an embryogenic callus containing embryos;
 - introducing an expression vector into said incubating embryogenic callus to produce transformed embryogenic callus, wherein said expression vector comprises a selectable marker gene and a second foreign gene, or
 - introducing two expression vectors into said incubating embryogenic callus to produce transformed embryogenic callus, wherein one of said expression

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